REMARKS

I. Status of the Application

Claims 23-44 are pending in this application. In the March 25, 2005 Office action, the examiner rejected claims 23-38 under 35 U.S.C. § 102(e) as allegedly being anticipated by U.S. Patent No. 6,807,069 to Nieminen et al. (hereinafter "Nieminen"). In addition, the examiner objected to the drawings because of an informality in Figure 1.

In this response, applicants have amended claims 23 and 37. Applicants have also provided a replacement sheet for Figure 1 of the drawings to overcome the examiner's objection to the drawings. Applicants respectfully request reconsideration of pending claims 22-44 in view of the foregoing amendments and the following remarks.

II. The Objection to the Drawings Should be Withdrawn

In the March 25, 2005 Office action, the examiner objected to the drawings because of the blank boxes of Figure 1. Pursuant to the examiner's request, applicants have submitted a revised Figure 1 which includes short descriptive labels to clarify what is contained in the blank boxes of Figure 1. Applicants request entry of the replacement sheet for Figure 1, and respectfully submit that the examiner's objection to the drawings should be withdrawn.

III. Claim 23

In the March 25, 2005 Office action, the examiner rejected claim 23 under 35 U.S.C. § 102(e) as being anticipated by Nieminen.

A. Applicants' Invention

With reference to claim 23, applicants' invention comprises first and second input terminals configured to receive a primary AC signal having an input frequency. A transformer device is included having a primary side and a secondary side, the primary side having a primary inductance and first and second primary terminals, and the secondary side having a secondary inductance. A first switch device is coupled between the first input terminal and the first primary terminal, the first switch device having an off condition and an on condition, and the first switch configured to conduct current in a first direction in the on condition. A second switch device is coupled between the second input terminal and second primary terminal, the second switch device having an off condition and an on condition, and the second switch configured to conduct current in a second direction in the on condition. A first bypass is coupled in parallel with the first switch device, and a second bypass is coupled in parallel with the second switch device. The first bypass is operable to conduct current when the first switch is in an off condition, and the second bypass operable is to conduct current when the second switch is in an off condition. The first switch device, the primary inductance of the transformer device, and the second switch device are connected in a serial sequence. Claim 23, as amended, also includes the limitation that "the first switch device and the second switch device are provided in antiseries with respect to one another."

The arrangement disclosed in the present application provides a respective switch device instead of an explicit rectifier device on the input side or primary side of the transformer and instead of a corresponding power factor adaptation circuit between the primary side of the transformer device and the input for the mains voltage, with the result

that a serial sequence comprising the first switch device, the primary inductance of the transformer device, and the second switch device is produced, wherein the first switch device and the second switch device in each case have a bypass function and are formed in antiseries with respect to one another. The first switch device and the second switch device can be switched on and/or off in an alternative manner with respect to one another, use being made of a high or higher switching frequency in comparison with the input frequency of the primary current or the primary voltage. Furthermore, a controlled, mutually alternative switch-on and/or –off which is dependent on the primary potential and/or on the primary current is produced for the two switch devices. Consequently, as viewed overall, a current/voltage conversion with at the same time rectification and power factor adaptation is realized without having to use the multiplicity of lossy components known in the prior art.

The above described arrangement, such as in the case of a current/voltage converter arrangement, allows the number of components affected by critical power losses to be critically reduced compared with the prior art. At the same time, a reliable current/voltage conversion with power factor adaptation and/or, if appropriate, rectification can be realized.

B. Nieminen

The Nieminen reference does not disclose all the limitations of claim 23. For example, the Nieminen reference does not disclose that "the first switch device and the second switch device are provided in antiseries with respect to one another." In particular, as shown in Fig. 1b, Nieminen's first and second switch devices having

respective bypass functionalities are not formed in anti-series with respect to one another.

As another example of differences the present application and Nieminen, between the terminals for the input voltage U_i in Nieminen, the switch devices and the input terminals of the transformer device provide no arrangement in the form of a serial sequence. Furthermore, the switch devices of Nieminen are not formed between the terminals for the primary voltage U_i and the input terminals of the primary side of the transformer device.

As discussed above, Nieminen does not disclose all limitations of claim 23 of the present application. Accordingly, it is respectfully submitted that claim 23 is allowable and the examiner's rejection of claim 23 as anticipated by Nieminen under 35 U.S.C. § 102(e) should be withdrawn.

IV. Claims 24-44

Claims 24-38 depend from and incorporate all the limitations of independent claim 23. As argued above, independent claim 23 is allowable. Accordingly, it is respectfully submitted that dependent claims 24-38 are also allowable for at least the same reasons that independent claim 23 is allowable.

The examiner's office action summary indicates that claims 39-44 have been rejected. However, applicants have searched the Office action and find no rejection of claims 39-44. Accordingly, it is respectfully submitted that claims 39-44 should be allowed.

V. Conclusion

For all of the foregoing reasons, it is respectfully submitted the applicant has made a patentable contribution to the art. Favorable reconsideration and allowance of this application is, therefore, respectfully requested.

In the event applicant has inadvertently overlooked the need for an extension of time or payment of an additional fee, the applicant conditionally petitions therefore, and authorizes any fee deficiency to be charged to deposit account 13-0014.

Respectfully submitted,

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Enclosure: Replacement Fig. 1